

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants : Patrick M. Martin, Matthew Lassiter, Darren Taylor, Michael Cangemi,  
and Eric Poortinga

Serial No. : To Be Assigned

Filing Date : September 9, 2003

For : PHOTOMASK HAVING AN INTERNAL SUBSTANTIALLY  
TRANSPARENT ETCH STOP LAYER

Art Group : To Be Assigned

Examiner : To Be Assigned

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
Washington, D.C. 20231

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Name: Brian A. Comack

Signature: 


Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, applicants enclose herewith  
forms PTO/SB/08A and PTO/SB/08B containing references which may be deemed relevant  
to the above-identified application. Pursuant to the waiver of 37 C.F.R. 1.98(a)(2)(i) copies  
of only the non-patent literature are enclosed. The Examiner is respectfully requested fully  
to consider all of the enclosed items, and independently assess their teachings.

No fee is deemed necessary in connection with the filing of this Information  
Disclosure Statement. If any fee is required to preserve the pendency of the application,  
authorization is hereby given to charge the amount of any such fee to Deposit Account No.  
01-1785.

Respectfully submitted,

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Dated: September 9, 2003  
New York, New York

By:   
Brian A. Comack, Reg. No. 45,343

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Substitute for form 1449A/PTO				Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				Application Number	TBA
				Filing Date	September 9, 2003
				First Named Inventor	Patrick M. Martin
				Art Unit	TBA
				Examiner Name	TBA
				Attorney Docket Number	67493/63
Sheet	1	of	2		

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. 1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
	1	US- 4,178,403	12-11-1979	Sakurai et al.	
	2	US- 4,556,608	12-03-1985	Kaneki et al.	
	3	US- 4,720,442	01-19-1988	Shinkai et al.	
	4	US- 5,451,543	09-19-1995	Woo et al.	
	5	US- 5,460,908	10-24-1995	Reinberg	
	6	US- 5,482,799	01-09-1996	Isao et al.	
	7	US- 5,578,402	11-26-1996	Watanabe	
	8	US- 5,693,568	12-02-1997	Liu et al.	
	9	US- 5,725,973	03-10-1998	Han et al.	
	10	US- 5,756,396	05-26-1998	Lee et al.	
	11	US- 5,939,227	08-17-1999	Smith	
	12	US- 5,955,222	09-21-1999	Hibbs et al.	
	13	US- 6,187,480	02-13-2001	Huang	
	14	US- 2001/044,056	11-22-2001	Kokubo	
	15	US- 6,335,130	01-01-2002	Chen et al	
	16	US- 6,355,557	03-12-2002	Stinnett et al.	
	17	US- 6,544,696 B2	04-08-2003	Westerman et al.	
		US-			
		US-			
		US-			

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Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449B/PTO		<b>Complete if Known</b>			
		Application Number	TBA		
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Filing Date	September 9, 2003		
		First Named Inventor	Patrick M. Martin		
		Group Art Unit	TBA		
		Examiner Name	TBA		
Sheet	2	of	2	Attorney Docket Number	67493/63

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	18	CANON PRESENTATION, "Canon's IDEAL: Innovative Double Exposure by Advanced Lithography," BACUS News, SPIE, April 2001, Vol. 17, Issue 4, p. 1-7.	
	19	T. EBIHARA, T. OGA, P.D. RHYINS, M. SWEIS, P.M. MARTIN, "150-nm dense/isolated contact hole study with Canon IDEAL technique", SPIE Proceeding 4562-119.	
	20	R.L. KOSETELAK, C. PIERRAT, J.G. GAROFALO, and S. VAIDYA, "Exposure characteristics of alternate aperture phase-shifting masks fabricated using a subtractive process", J. Vac. Sci. Tech. B0, 3055-3061 (1992).	
	21	M.D. LEVENSON, N.S. VISWANATHAN, and R.A. SIMPSON, "Improving Resolution with a Phase-Shifting Mask", IEEE Trans. Elect. Dev. ED-29, 1828-1836 (1982).	
	22	K.D. LUCAS, C.M. YUAN, and A.J. STROLJWAS, "A rigorous and practical vector model for phase shifting masks in optical lithography", Proc. SPIE 1674, 252-263 (1992).	
	23	ARMIN SEMMLER, L. MADER, A. ELSNER, R. KOEHLE, U. GRIESINGER, C. NOELSCHER, "Application of 3D EMF Simulation for Development and Optimization of Alternating Phase Shifting Masks", Optical Microlithography XIV, Proceedings of SPIE, 2001, P. 356-367, Vol. 4346 (Christopher J. Proglar, ed.).	
	24	SONG PENG, "Through-Focus Image Balancing of Alternating Phase Shifting Masks", SPIE Vol. 3873, p. 328-336 (1999).	
	25	T. TERASAWA, N. HASEGAWA, A. IMAI and S. OKAZAKI, "Analysis of Nonplanar Topography Effects of Phase Shift Masks on Imaging Characteristics", Japanese J. Appl. Phys. 34, 6578-6583 (1995).	
	26	T. TERESAWA, N. HASEGAWA, T. TANAKA, S. KATAGIRI, and T. KUROSAKI, "Improved Resolution of an i-line stepper using a phase-shift mask", J.Vac. Sci. Tech. B8, 1300-1308, (1990).	

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